CONTENTS

Structural investigation of t-butylethylamine by gas electron diffraction, ab initio calculations and vibrational spectroscopy
S. Konaka, J. Hirose, A. Suwa, H. Takeuchi and T. Egawa (Sapporo, Japan), K. Siam (Pittsburg, KS, U.S.A.), J.D. Ewbank and L. Schäfer (Fayetteville, AR, U.S.A.) 1

2-Methylpropenoyl chloride: gas phase molecular structure and conformational composition as determined by electron diffraction
L. Postmyr and K. Hagen (Dragvoll, Norway) and Q. Shen (Hamilton, NY, U.S.A.) 17

Low-frequency torsional oscillations in the symmetrically substituted halopropanes
R. Stølevik and P. Bakken (Dragvoll, Norway) 27

1,2-Diiododisilane and 1,1,2,2-tetraiododisilane: gas-phase molecular structure and conformational composition as determined by electron diffraction
E. Røhmen, K. Hagen and R. Stølevik (Trondheim, Norway), K. Hassler and M. Pöschl (Graz, Austria) 41

Determination of the molecular structure of ethylphosphonothioic dichloride by gas-phase electron diffraction and ab initio calculations
D.G. Anderson, S. Cradock, G.A. Forsyth and D.W.H. Rankin (Edinburgh, Gt. Britain), J.F. Sullivan, T.J. Hizer and J.R. Durig (Columbia, SC, U.S.A.) 51

Microwave spectrum and structure of the conformers of 3,3-difluoroacryloyl fluoride
H.S. Tam and M.D. Harmony (Lawrence, KS, U.S.A.), J.C. Brahms and W.P. Dailey (Philadelphia, PA, U.S.A.) 59

Influence of the structure of ketones and acidity of phenols upon their complexation processes. Part 2. *n*- vs. π-complex competition depending on ketone branching and phenol acidity
A. Massat, Ph. Guillaume, J.P. Doucet and J.E. Dubois (Paris, France) 69

Polarized FT-IR spectra of adamantanol derivatives. Part III. Adamantan-1-ol and its deuterated analogue
J. Baran and M. Wierzejewska-Hnat (Wroclaw, Poland), E.T.G. Lutz and J.H. van der Maas (Utrecht, The Netherlands) 87

Far-infrared spectra and ab initio calculations of nitrosyl chloride
J.R. Durig, T.J. Geyer and Y.H. Kim (Columbia, SC, U.S.A.), V.F. Kalasinsky (Mississippi State, MS, U.S.A.) and J.K. McDonald (Redstone Arsenal, AL, U.S.A.) 103

Far-infrared spectrum, barriers to internal rotation, structural parameters, and vibrational assignment of cyclopropylcarbonyl fluoride
J.R. Durig, A.-Y. Wang and T.S. Little (Columbia, SC, U.S.A.) 117

Far-infrared spectrum, conformational stability, barriers to internal rotation, ab initio calculations, and vibrational assignment of propionyl bromide
J.R. Durig, G.A. Guirgis and H.V. Phan (Columbia, SC, U.S.A.) 139

The infrared spectra of the MoOCl, MoO_2Cl_2, WOCl, WO_2Cl_2, MoO_2, MoO_3 and Mo_3O_9 gaseous molecules
D.L. Neikirk, J.C. Fagerli, M.L. Smith, D. Mosman and T.C. Devore (Harrisonburg, VA, U.S.A.) 165

Surface enhanced Raman spectroscopy on nucleic acids and related compounds adsorbed on colloidal silver particles
K. Kneipp (Berlin, Germany), W. Pohle (Jena, Germany) and H. Fabian (Berlin, Germany) 183

Molecular structure, force field and vibrational spectra of tetramethoxysilane
I.S. Ignatyev, A.N. Lazarev, T.F. Tenisheva and B.F. Shchegolev (Leningrad, U.S.S.R) 193

Polarized vibrational study of triammonium hydrogen disulphate
V. Videnova-Adrabinska (Wroclaw, Poland) 203

Hydrogen bonding. Part 33. NMR study of the hydration of choline and acetylcholine halides
K.M. Harmon, A.C. Akin, G.F. Avci, L.S. Nowos and M.B. Tierney (Rochester, MI, U.S.A.) 223

Side-chain structure of poly(methacrylic acid) and its zinc salts in the solid state as studied by high-resolution solid-state ^{13}C NMR spectroscopy
M. Asada, N. Asada and A. Toyoda (Kawasaki-shi, Japan), I. Ando and H. Kurosu (Tokyo, Japan) 237
Synthesis and X-ray structural investigation of 1-(4-methoxyphenyl)-3-phenoxy-4-methylthio-4-methoxyimino-2-azetidinones
P. Gluziński, E. Grochowski, J.W. Krajewski and K. Pupek (Warsaw, Poland) 249
A dipole moment study of weakly acidic compounds
H. Lumbroso (Paris, France) 259
Empirical energy parameters for structural modelling of alkali metal thiocyanate crystals in a standard formalism
G. Brink and L. Glasser (Wits, Republic of South Africa) 277
Theoretical investigation of intermolecular hydrogen-bonded complexes in systems: substituted carbinols(silanols)–ketones or ethers
M.M. Reichstat (Moscow, U.S.S.R.), U.B. Mioč, Lj.J. Bogunović and S.V. Ribnikar (Belgrade, Yugoslavia) 283

Short communication
Asymmetric potential functions for ring inversion: experiment and theory
V.S. Mastryukov (Moscow, U.S.S.R.) 291

Book reviews 297

Author index 301

Subject index 303